

Title (en)  
DISTRIBUTED RADAR SYSTEM AND METHOD OF OPERATION THEREOF

Title (de)  
VERTEILTES RADARSYSTEM UND VERFAHREN ZUM BETRIEB DAVON

Title (fr)  
SYSTÈME DE RADAR DISTRIBUÉ ET SON PROCÉDÉ DE FONCTIONNEMENT

Publication  
**EP 4133304 A1 20230215 (EN)**

Application  
**EP 21717566 A 20210321**

Priority  
• IL 27381420 A 20200405  
• IL 2021050313 W 20210321

Abstract (en)  
[origin: WO2021205429A1] An antenna system, corresponding control system, and method for operation of the antenna are described. The antenna system comprises: a plurality of antenna units arranged in a predetermined spaced apart arrangement in a selected region and configured to collectively transmit output radiation signal having known beam structure and a control system, the control system is connected to the plurality of antenna units and configured for: transmitting operational instructions to said plurality of antenna units for transmitting radiation signals; receiving data indicative of collected radiation signals, collected in response to reflection of the transmitted signal, and processing the data indicative of the collected radiation signals and determining at least data on angular location of one or more objects associated with said collected radiation signals. The processing comprises, for at least one axis: applying a first mono-pulse beam processing characterized by a first angular shift, determining relative location of said one or more objects with respect to internal features in received beam, and applying a second mono-pulse beam processing characterized by a second angular shift for determining location of said one or more objects with respect to said arrangement of plurality of antenna units. An antenna system, corresponding control system, and method for operation of the antenna are described. The antenna system comprises: a plurality of antenna units arranged in a predetermined spaced apart arrangement in a selected region and configured to collectively transmit output radiation signal having known beam structure and a control system (500). the control system is connected to the plurality of antenna units and configured for: transmitting operational instructions to said plurality of antenna units for transmitting radiation signals; receiving data indicative of collected radiation signals, collected in response to reflection of the transmitted signal, and processing the data indicative of the collected radiation signals and determining at least data on angular location of one or more objects associated with said collected radiation signals. The processing comprises, for at least one axis: applying a first mono-pulse beam processing characterized by a first angular shift, determining relative location of said one or more objects with respect to internal features in received beam, and applying a second monopulse beam processing characterized by a second angular shift for determining location of said one or more objects with respect to said arrangement of plurality of antenna units.

IPC 8 full level  
**G01S 13/00** (2006.01); **G01S 13/44** (2006.01); **G01S 13/58** (2006.01); **H01Q 21/29** (2006.01)

CPC (source: EP US)  
**G01S 13/003** (2013.01 - US); **G01S 13/4418** (2013.01 - EP US); **G01S 13/4454** (2013.01 - EP US); **G01S 13/4463** (2013.01 - US); **G01S 13/58** (2013.01 - EP); **G01S 13/582** (2013.01 - US); **G01S 13/878** (2013.01 - EP); **H01Q 1/27** (2013.01 - EP); **H01Q 3/30** (2013.01 - EP); **H01Q 3/36** (2013.01 - US); **H01Q 21/061** (2013.01 - EP); **G01S 13/003** (2013.01 - EP); **G01S 13/4463** (2013.01 - EP); **G01S 13/582** (2013.01 - EP); **G01S 2013/0245** (2013.01 - EP US)

Citation (search report)  
See references of WO 2021205429A1

Designated contracting state (EPC)  
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Designated extension state (EPC)  
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KH MA MD TN

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